

REMARKS

Claims 2-20 and 22-24 remain pending. Reconsideration of the rejections of the claims is requested in view of the foregoing amendments to the claims and for the following reasons.

Claims 2, 4 and 22 been amended to clarify that the scanning probe microscope has a scanning piezoelectric element for performing micrometer-class scanning and a movement mechanism for performing a millimeter-class wide area scanning. See page 45, lines 18-23 and page 49, lines 19-23 of the specification, for example. The claims are further amended to clarify that the probe scans the millimeter class wide area on the surface of the sample by the movement mechanism. As amended, claims 2, 4 and 22, as well as claims 3, 5-7 and 23-24 are patentable over the combination of Hosaka '448, Kajimura '741 and Gamble, whether or not the combination further includes Hosaka '642 as applied to claim 4.

Claim 8 sets forth that the servo control system is continued relating to the distance between the probe and sample surface (expansion and contraction of the piezoelectric

element 61) at least when the probe is made to approach the sample surface. This enables the approach movement of the probe while continuing the servo control at each of the plurality of sampling positions. Due to this, measurement defined by a millimeter-class scan area is performed quickly. Accordingly, claims 8-13 are not obvious in view of Hosaka '448, Kajimura '741 and Gamble, whether or not the combination further includes Hosaka '642 as applied to claim 10.

Applicants note that each of claims 5, 6, 11 and 14, includes an auxiliary movement mechanism in the claimed combination for making the probe move in tandem at an equal speed in the same direction as the scan motion of the movement mechanism when the probe is made to approach the surface of the sample for measurement at the sampling position. Similarly, method claim 16 includes a step of causing the scan motion for tandem movement by an auxiliary movement mechanism when the probe approaches the sample surface for measurement. The combination of Hosaka '448, Kajimura '741 and Gamble does not disclose these limitations. Although the Examiner applies Hosaka '642 and Hosaka '653 in rejecting these claims (except for claim 14), the piezoelectric movement (for X-Y movement)

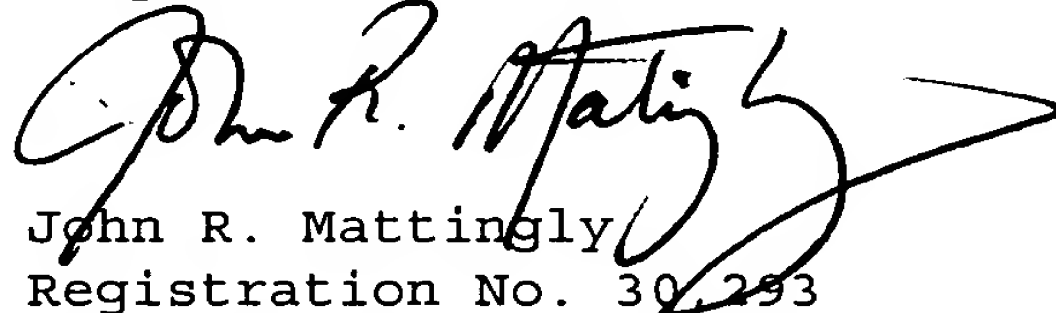
of Hosaka '653 is not auxiliary since the sample 5 does not appear to be subject to movement by a movement mechanism in the manner claimed by Applicants. Further, although Hosaka '642 shows an XYZ scanner, it is not an auxiliary movement mechanism, as claimed. Accordingly, the proposed combination of the references can only be made by hindsight reconstruction using the claimed invention as a guide, which is impermissible. Therefore, the rejection of these claims, as well as the rejection of claims 15, 17 and 18 (whether or not the combination also includes Okada et al) should be withdrawn.

With respect to claim 19, Applicants set forth in the claimed combination an approaching and separating signal supplying means in combination with a control circuit that generates a control voltage based on the differential signal that is applied to the piezoelectric element to control the approach and separation movement. The claimed differential signal is calculated by a difference between a voltage signal output by combining a reference distance voltage signal and an approach and separation voltage signal, and a detection signal that is output by the displacement detection mechanism for

detecting displacement of the probe in a height direction with respect to the surface of the sample. This combination is not set forth in Hosaka' 448, Kajimura '741 and Gamble, therefore the 35 U.S.C. § 103 rejection of claim 19 should be withdrawn. Further, claim 20 which depends from claim 19, should be found patentable for the same reason.

In view of the foregoing amendments and remarks, reconsideration and reexamination are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John R. Mattingly", with a large, sweeping flourish extending to the right.

John R. Mattingly
Registration No. 30,293
Attorney for Applicants

MATTINGLY, STANGER & MALUR
1800 Diagonal Road, Suite 370
Alexandria, Virginia 22314
(703) 684-1120
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